JPRS 77331

5 February 1981

Worldwide Report

NUCLEAR DEVELOPMENT AND PROLIFERATION

No. 81

FBIS FOREIGN BROADCAST INFORMATION SERVICE

NOTE

JPRS publications contain information primarily from foreign newspapers, periodicals and books, but also from news agency transmissions and broadcasts. Materials from foreign-language sources are translated; those from English-language sources are transcribed or reprinted, with the original phrasing and other characteristics retained.

Headlines, editorial reports, and material enclosed in brackets [] are supplied by JPRS. Processing indicators such as [Text] or [Excerpt] in the first line of each item, or following the last line of a brief, indicate how the original information was processed. Where no processing indicator is given, the information was summarized or extracted.

Unfamiliar names rendered phonetically or transliterated are enclosed in parentheses. Words or names preceded by a question mark and enclosed in parentheses were not clear in the original but have been supplied as appropriate in context. Other unattributed parenthetical notes within the body of an item originate with the source. Times within items are as given by source.

The contents of this publication in no way represent the policies, views or attitudes of the U.S. Government.

PROCUREMENT OF PUBLICATIONS

JPRS publications may be ordered from the National Technical Information Service, Springfield, Virginia 22161. In ordering, it is recommended that the JPRS number, title, date and author, if applicable, of publication be cited.

Current JPRS publications are announced in Government Reports Announcements issued semi-monthly by the National Technical Information Service, and are listed in the Monthly Catalog of U.S. Government Publications issued by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Indexes to this report (by keyword, author, personal names, title and series) are available from Bell & Howell, Old Mansfield Road, Wooster, Ohio 44691.

Correspondence pertaining to matters other than procurement may be addressed to Joint Publications Research Service, 1000 North Glebe Road, Arlington, Virginia 22201.

JPRS 77331

5 February 1981

WORLDWIDE REPORT

NUCLEAR DEVELOPMENT AND PROLIFERATION

No. 81

CONTENTS

ASIA

INDIA

Ramanna Appointment 'New Hope for Nuclear Scientists'
(THE HINDU, 28 Dec 80) 1

INDONESIA

New Nuclear Reactor Planned for Serpong, Use of Nuclear Energy Urged
(KOMPAS, 25 Nov 80) 2

JAPAN

New Uranium Experimental Plant Planned
(KYODO, 21 Jan 81) 4

PAKISTAN

Briefs

Development of Atomic Plant 5

TAIWAN

Briefs

Guidelines for Nuclear Development 6

EAST EUROPE

CZECHOSLOVAKIA

Briefs

First Microtron in CSSR 7

NEAR EAST AND NORTH AFRICA

SAUDI AFRICA

Nuclear Research Center Proposed
(Alan Kenney; ARAB NEWS, 11 Jan 81)........................... 8

SUB-SAHARAN AFRICA

MADAGASCAR

Yugoslav Aid for Uranium Mining Reported
(MADAGASCAR-MATIN, 13, 14 Oct 80)............................. 10

Cooperation Agreements Signed
Further Details

NIGER

Briefs

Nuclear Program Not Possible 12

WEST EUROPE

DENMARK

Poll Shows Opposition to Nuclear Power Grows
(AKTUELT, 15 Dec 80)... 13

FINLAND

Power Authority To Investigate Possible Nuclear Plant Water Trap Flaw
(HELSINGIN SANOMAT, 9 Dec 80)................................ 14

FRANCE

Uranium Prospecting, Extraction Continuing Apace
(Olivier Drouin; LE NOUVEL ECONOMISTE, 24 Nov 80)............ 16

Pronuclear-Antinuclear Forces: New Strategy Toward Planned Plant
(Marc-Ambroise Rendu; LE MONDE, 20 Dec 80).................... 23

NETHERLANDS

CDA, PvdA Internally Split on 'Active Neutralism,' 'Nuclear Pacifism'
(Frank Lafort; ELSEVIERS MAGAZINE, 13 Dec 80)................ 27

SWEDEN

People in Vicinity of Nuclear Plants To Get Iodine Pills
(DAGENS NYHETER, 24 Dec 80).................................... 31

Ringhals Cold-water Discharge Causes Eel Deaths
(Margareta Artsman; SVENSKA DAGBLADET, 15 Dec 80)............ 33

RAMANNA APPOINTMENT 'NEW HOPE FOR NUCLEAR SCIENTISTS'

Madras THE HINDU in English 28 Dec 80 p 16

[Text] THE appointment of Dr. Raja Ramanna as Director of Bhabha Atomic Research Centre and member for Research and Development in the Atomic Energy Commission has opened new vistas of hope and fulfilment for the "frustrated scientists" at Trombay.

Dr. Raja Ramanna's taking over as Secretary, Department of Defence, Science, Research and Development during the Janata Ministry, after his close association with BARC from its very inception, left a big void in the establishment which witnessed the departure of dedicated scientists.

One of the four scientists associated with the late Dr. Homi Bhabha, "father of nuclear energy", in building up the atomic energy facilities at Trombay, Dr. Ramanna inspired research workers to explore new pastures in the advancement of nuclear science. From the construction of "Apsara" to the peaceful nuclear explosion at Pokharan, he played a leading role.

Being a fusion scientist, Dr. Ramanna embarked upon challenging programmes to put the country on the fusion energy map. He knew well that an abundance of energy can be tapped economically and successfully through the fast breeder reactors.

The thrust of the R & D efforts at the Centre is in the area of sodium technology, metallurgy, reprocessing, engineering and materials science. Construction work on a radio-metallurgy laboratory, a materials development laboratory and a radio-chemistry laboratory is in progress.

Work is going on a core design of a 500 MW sodium cooled fast breeder reactor.

A pilot plant and a fast breeder complex for BARC was set up at Kalpakkam.

During his tenure in the BARC, the erection of 100 MWE thermal reactor, project R-5 was taken up. His return is expected to speed up the completion of this project, which he considers to be one of his major tasks at Trombay.

The reactor vessel and coolant channel assemblies are being fabricated within BARC, while other components such as end shield, annular shield, deck shield, fuelling machines heavy water and process water heat exchangers are being manufactured in various engineering firms. The reactor building, service building and stack civil works are nearing completion.

Another challenging task awaiting Dr. Ramanna is the working of the variable energy cyclotron in Calcutta. Because of the continuously erratic power supply a 2 MVA diesel generator has been installed. The plant will give a big push to nuclear physics research programmes.

During his tenure as Secretary to the Department of Defence, he gave importance to R & D programmes including modern tanks and armour installation.

Dr. Ramanna's lasting contribution in the Defence Research Department is the recognition given to "merit". He totally revamped the R & D personnel promotion policy.

CSO: 5100

NEW NUCLEAR REACTOR PLANNED FOR SERPONG, USE OF NUCLEAR ENERGY URGED

Jakarta KOMPAS in Indonesian 25 Nov 80 pp 1, 12

[Article: "Nuclear Power Station Must Be Operational by the End of PELITA IV: Prof Baiquini Says without Nuclear Power More Costly Energy Will Have To Be Purchased"]

[Excerpts] Indonesia must have entered into the nuclear power era by the last decade of this century. In economic terms this could begin at the end of the 80's. The growing use of nuclear energy becomes very important in the coming decade.

This was stressed by Prof A. Baiquini, director general of the National Atomic Energy Agency (BATAN) in a discussion at the BATAN Central Secretariat in Jakarta at the end of last week.

"The nuclear reactor as a power station must be operational at least by the end of PELITA IV [fourth five-year development plan]," he added.

To date Indonesia is known to have 2 reactors for research and experimental purposes located in Bandung and Yogyakarta, with a capability of 1 Mw and 100 Kw, respectively.

An all-purpose reactor will be added in the near future at the National Center for Science and Technology Development in Serpong. This new reactor will have a 30-Mw capacity.

The development of the reactor in Serpong will be the first step in the "beginning phase of the nuclear power program." The reactor will also foster the development of nuclear fuels and radio-isotope production for such fields as agriculture, medicine and so on.

In addition development will be directed toward better understanding of the preparation and management of radioactive dumps as well as nuclear instrumentation.

Baiquni said Indonesia's nuclear program will not be a hurried one. This course has been selected because the more cautious steps are the best and most suitable for a program involving an energy sector which demands the most modern and complicated technology.

In projections for the coming decade, nuclear energy begins to enter into a community consumption program. To date no steps have been initiated which are directly connected with the first step to be taken in this sector, that is, deciding on the type of reactor to be selected by the government. The government has not yet determined which type of reactor is to be used.

As is known, the initial construction of the installation is costly. For example, funds of about 3/4 of a billion U.S. dollars are needed to build an electric power station with a 680-Mw capacity. Operating and nuclear fuel costs, however, are less. Also several environmental factors must be considered.

Weighed against other sources of energy such as coal or oil, nuclear energy materials for the final production unit are always cheaper.

It is further projected that about 25 to 30 percent of Indonesia's energy needs will be met with nuclear power by the end of this century and the beginning of the next century.

In another portion of his explanation, Baiquni firmly rejected the opinion that industrial advancement and the use of nuclear energy must be supported by what is known as the "military industries." Canada is used as an example. Its industrial and nuclear energy advancement was developed without being based on military industries.

As far as depending on overseas technology in regard to nuclear energy, this may not be necessary for a country such as India has proved increasingly capable of lessening its dependence on foreign aid and continually enlarges its indigenous or national contribution to this technology.

Indonesia also need not always doubt this or be disturbed about it because at the rate the program is operating now, it is estimated that by PELITA IV national experts will be capable of producing nuclear fuel elements along with several other needs.

The only problem to date is that concrete steps have not yet been taken toward using nuclear energy, in the sense that no decision has been taken as to the type of reactor to be used.

Despite this, Baiquni said that no fewer than 10 years are needed from the time a contract is let for a nuclear installation to the time power is produced by the installation. Two to 3 years of this 10-year period are needed for negotiating the contract and related matters, and the remaining years are needed for the construction of the installation itself.

6804
CSO: 5100

NEW URANIUM EXPERIMENTAL PLANT PLANNED

OW211113 Tokyo KYODO in English 0908 GMT 21 Jan 81

[Text] Tokyo, 21 Jan (KYODO)--The Science and Technology Agency on Wednesday permitted a chemical industry company to construct a new-method uranium enrichment experimental plant in Miyazaki Prefecture, Kyushu. Asahi Chemical Industry Co, a major chemical company, is to build the plant at the Hososhima industrial area in Hyuga, Miyazaki Prefecture.

At the test plant, about one-25th in scale of a plant for commercial use, the company will study technical and economic prospects for commercial application of the new method to enrich uranium 235 by taking advantage of differences in chemical properties of uranium.

The company will start construction of the test plant with four enrichment towers, each about one meter in diameter and about three meters in height, within this year for completion by June 1983. The test plant will have capability of producing 300 kilograms of 3-percent enriched uranium in a year.

The company plans to run the test plant for about two years to study economic prospects. The plan will cost about yen 12 billion, two-thirds of it subsidized by the government.

The chemical company started studying the new method in 1972 and has been conducting small-scale experiments at its Kawasaki plant, Kanagawa Prefecture, with government subsidies.

The agency gave the green light for the test plant's construction after checking the safety standards.

Local inhabitants are concerned about safety of the aspect and the agency said it would enforce strict regulations.

CSO: 5100

BRIEFS

DEVELOPMENT OF ATOMIC PLANT--Karachi, 30 November--Dr Munir Ahmed, chairman of Atomic Energy Commission, while welcoming President Suharto and President Zia, disclosed plans to develop a bigger atomic plant with four or five times more capacity than the present one in Karachi. He further said that the Karachi plant was the largest in Islamic countries and second largest in all advanced countries. He disclosed that plans are to develop a plant with capacity for 600 megawatts which is four or five times more than the capacity of the present plant. He said that we have to depend increasingly on atomic energy due to the paucity of oil and other energy sources. [Text] [Lahore NAWA-I-WAQT in Urdu 1 Dec 80 pp 3, 10] 7997

CSO: 5100

BRIEFS

GUIDELINES FOR NUCLEAR DEVELOPMENT--Taipei, 17 Jan (CNA)--The Executive Yuan has approved a series of measures establishing guidelines to govern the development of nuclear power on the island in the years to come. The regulatory package, which took effect Jan 15, declares that atomic energy will be used only for peaceful purposes and that the country will permit safety checks by the International Atomic Energy Agency. The major points in the package can be broken down into the following four areas: [1] A joint venture nuclear energy company will be established with government backing and the cooperation of foreign firms. The concern will import know-how in the areas of design, analysis and quality control methods. [2] Establish a nuclear fuel manufacturing plant. Importation of foreign techniques on designing and producing the nuclear fuel is urged. [3] Participate in international cooperation projects on nuclear power development. [4] Diversify the supply sources of equipment, technology and fuel. The cabinet said that implementation of the regulatory package will ensure safety standard and eventual self-reliance in nuclear technology. [Text] [OW171121 Taipei CNA in English 0931 GMT 17 Jan 81]

CSO: 5100

BRIEFS

FIRST MICROTRON IN CSSR--The first microtron unit in the CSSR became operational on 4 January 1981 at the faculty of nuclear and physical engineering of the Czech Institute of Technology (CVUT) in Prague. The unit was built in cooperation with the Joint Institute for Nuclear Research in Dubno, USSR. The microtron will primarily serve the needs of the Czechoslovak geological survey. [Prague RUDE PRAVO in Czech 5 Jan 81 p 1]

CSO: 5100

NUCLEAR RESEARCH CENTER PROPOSED

Jiddah ARAB NEWS in English 11 Jan 81 p 2

[Article by Alan Kenney]

[Text]

JIDDAH, Jan. 10 — A leading United States nuclear scientist has held discussions here with local officials on establishing a nuclear research facility at King Abdul Aziz University.

Dr. Bogdan Maglich, president of Fusion Energy Corporation, was invited to the Kingdom by Prince Mohammed Al-Faisal, board member of the Geneva-based King Faisal Philanthropic Foundation, Dr. Abdullah Omar Nasif, rector of KAU, and Dr. Fawaz Alem, dean of the Institute of Meteorology and Arid Land Studies at KAU.

During the scientist's visit, he has given lectures on his company's research in fusion energy, held discussions with professors of KAU's nuclear engineering and physics departments and presented proposals for a cooperation program in fusion energy at the university. "The nuclear research facility at KAU would involve the most advanced concepts in the field and the very best technology obtainable in the United States and if necessary, in other countries of the free world," Maglich told Arab News.

The proposed research facility, would include the latest developments in fundamental nuclear sciences, nuclear fusion energy research, nuclear fission energy research and studies in nuclear particle-based solid state and surface physics research. "The latter has significance in the development of photovoltaic solar cells," Maglich said. He added, "KAU is very advanced in solar energy research — it is probably one of the most advanced places in the world, thanks to the efforts and initiative of the Institute of Meteorology and Arid Lands here."

The concept of a nuclear research facility at KAU is pointed towards the study of fusion energy, and in the case of Maglich, this is nuclear energy without the harmful effects of radioactivity. Maglich is a leading force in a growing movement to think small in terms of nuclear power. And his research into fusion energy and "advanced fuels" have made inroads into removing the hazards of nuclear energy as it exists today.

"KAU has already assembled quite an impressive and highly-qualified staff of competent and internationally-known scientists. A research facility will further attract the world's leading scientific talent," he said. "As you know, brilliance and talent are not limited only to the superpowers and developed countries. Brains are found equally in the developing countries of the Middle East and Asia," Maglich added.

Maglich's program deals with non-radioactive nuclear energy units operating on a small enough basis that the unit could be used to power villages, hotels, communities and ships — permitting a decentralization of nuclear energy use that has practical applications throughout the world, especially for developing countries, and isn't restricted to super powers. Nuclear energy orientation in the United States and other Western countries has gotten so bogged down in procedural, bureaucratic, institutional and budgetary considerations that meaningful progress for advancing new technologies in this sphere is hampered, according to the former Rutgers professor and principal investigator in high energy physics.

"It is likely that it will take two to three years to have the U.S.Congress allocate meaningful funding to this project (fusion energy), in spite of its widely recognized importance. Yet this could be started soon at KAU and, in parallel in the United States through a cooperative program, Maglich said. "In solar energy this type of Saudi-U.S. collaboration has been underway for some time under Dr. Alami of KAU.

A proposal for nuclear research in Saudi Arabia is not premature, according to Maglich. "Many developing countries now regret not to have started building their scientific nuclear potential from day one. They are now paying dearly for the lack foresight. However, Saudi Arabia does not lack foresight," he added. Maglich said the term 'nuclear research facility' doesn't have any implications toward nuclear weapons. "The word 'nuclear' often means to a uninformed person an atom bomb or deadly nuclear radiation. This is unreasonably inasmuch as it is to associate the word 'Chicago' with 'gangsters' or 'lasers' with 'death rays'."

CSO: 5100

YUGOSLAV AID FOR URANIUM MINING REPORTED

Cooperation Agreements Signed

Tananarive MADAGASCAR-MATIN in French 13 Oct 80 pp 1, 2

[Text] Before leaving the Democratic Republic of Madagascar, a Yugoslav economic delegation, headed by Bautovic, minister of energy of the RS [Socialist Republic] of Croatia and which included Paulovic, director of industrial investments, Rister, general director of INGRA [expansion unknown], and Haupert, negotiator and technician, yesterday evening at the Hotel Madagascar Hilton signed documents of bilateral cooperation for the development of our heavy industry.

The Malagasy contingent included Simon Pierre, interim minister of economy and commerce, and Colonel Hubert Andrianasolo, director general of OMNIS (National Military Office of Strategic Industries).

The two speeches given at this occasion by Bautovic and Simon Pierre emphasized the increasing cooperation between developing and nonaligned countries: the "South-South dialogue" as President Didier Ratsiraka has described it since the VIth Summit Conference of Nonaligned Countries in Havana, in accordance with the principle of "counting on one's own strength."

The cooperation between Third World and Nonaligned countries, once consolidated and reinforced, can only further world peace and allow peoples and countries to occupy their rightful place in international cooperation.

The two ministers did not miss emphasizing the fact that the documents signed yesterday solidified, both in their spirit and content, this South-South cooperation, by developing bilateral cooperation in the mutual interest of the two countries.

The documents concern essentially the development of our energy resources in order to permit us, in view of the current international political and economic situation, to gradually free ourselves of the "caprices" of the world petroleum market and further our economic independence.

Thus, following Bemolanga, the revolutionary authority, with the help of the Yugoslav Government, will begin to develop our uranium deposits located in the South near Tolagnaro. The reserves are currently appraised at 4,000 tons of "Yellow Cake."

These documents also mention the expansion of the Amboanio cement works (to effectively back up those of Ibity-Antsirabe) which will then produce 500,000 tons a year, and a study prospecting our coal deposits.

Further Details

Tananarive MADAGASCAR-MATIN in French 14 Oct 80 pp 1, 2

[Text] At the time of an energy crisis just about everywhere in the world, a situation aggravating the conflict between certain petroleum-producing countries obliged to supply their traditional clients, including some authentically non-aligned countries, the problem facing nations is the search, without further delay for these or other sources of energy.

Madagascar also does not want to lag behind. As of this year, and as President Ratsiraka himself announced in January, we have some hope of discovering petroleum in the Democratic Republic of Madagascar (see, especially, MADAGASCAR-MATIN of 18, 19 September 1980). The National Military Office for Strategic Industries, more widely known by its acronym OMNIS, the state organization to which the president of the republic gave the difficult mission of carrying through to a successful conclusion the energy strategy of the revolutionary forces, has made a spurt to meet the deadline of the "bet of 1985," the year which should see--if all goes well as it should, especially at OMNIS more than anywhere else--the first barrels of Malagasy petroleum.

But petroleum is not everything. Many nations are already turning toward other sources of energy and, in particular, nuclear energy. In this field also, Madagascar holds a trump card, the exploitation of its uranium deposits.

It is thus understandable why such importance was attached to the arrival of the Yugoslav "heavy mission," led by the Croatian minister of energy, and which was received personally by President Ratsiraka at the State Palace of Ambohitsorohitra.

Besides cement (see yesterday's edition), an accord of cooperation was in fact signed Sunday evening for the development of the Malagasy uranium deposits.

Hundreds of deposits are located in the South of Madagascar. Each of the deposits will produce approximately 6,000 tons of yellow cake. Only one of these deposits will be developed in cooperation with Yugoslavia.

Other uranium zones have been located besides the south; these zones also contain very large reserves, but OMNIS is continuing the prospecting.

If our annual production is estimated at 1,000 tons of yellow cake, at $85 per kilo, one can count on an income of $85 million annually, equivalent to 20 billion FMG per year in hard currency which is not negligible.

OMNIS, under the direction of Colonel Hubert Andrianasolo, director general, and with President Ratsiraka's approval, is carrying the energy hopes of an entire people. It is sailing before the wind. We hope it finds in the "RDM ship" the necessary fuel for the much dreamt of, but always delayed economic liftoff of the Malagasy people.

9128
CSO: 5100

BRIEFS

NUCLEAR PROGRAM NOT POSSIBLE--Energy is said to be the Achilles heel of all countries which are not oil producers. We are still far from producing oil in Niger, and uranium--whose transformation into energy requires a high level of technology which we also do not have--will for a long time be for us simply a market commodity. However, when the time comes, we will adopt a nuclear policy appropriate to the Niger nation of tomorrow. Our current policy is thus the same as that of all other countries trying to save the world from a nuclear holocaust. [Speech by President Seyni Kountche on 5 January at opening of conference of heads of Niger diplomatic missions.] [Excerpt] [Niamey LE SAHEL in French 6 Jan 81 pp 2-4, 7]

CSO: 5100

POLL SHOWS OPPOSITION TO NUCLEAR POWER GROWS

Copenhagen AKTUELT in Danish 15 Dec 80 p 11

[Text] More and more Danes now oppose nuclear power, according to the Analytical Institute AIM poll.

Based on that poll, 51 percent of the voters would say "no" it asked to vote on the introduction of nuclear power. In 1979 the corresponding figure was 49 percent.

One out of four voters would vote "yes" and one out of four voters still remain uncommitted, according to the poll.

The poll also shows that a majority, namely 58 percent, considers it a good idea to put the nuclear power issue to a popular vote.

Problems of Nuclear Waste

If the waste problems were solved, half of the voters would vote for nuclear power, while 30 percent would still oppose it. This represents a decline in "yes" voters. In 1979 some 53 percent of the voters would have voted "yes" if the waste problems had been solved.

The biggest difference between last year's and this year's poll lies in the number of uncommitted voters.

In 1979 some 14 percent were undecided with respect to the issue of nuclear power, while 16 percent are undecided this year.

Among Social Democratic voters, only 23 percent would now vote for nuclear power, while 50 percent would vote "yes" if the waste problems were solved.

Left of Social Democratic Party

Only 4 percent of the voters to the left of the Social Democratic Party would vote "yes" now, while 20 percent would approve of nuclear power if the waste problems were solved. Corresponding figures for voters to the right of the Social Democratic Party are 38 and 62 percent.

This poll was taken during the period 6 to 12 October and is based on a representative sampling of 1228 Danish voters.

8952
CSO: 5100

POWER AUTHORITY TO INVESTIGATE POSSIBLE NUCLEAR PLANT WATER TRAP FLAW

Helsinki HELSINGIN SANOMAT in Finnish 9 Dec 80 p 9

[Article: "IVO [Imatra Power] Studies Danger of Water Trap at Loviisa Nuclear Power Plant"]

[Text] Loviisa (HS) Experts have not been able to exclude from their calculations the possibility that a water trap could form in the cooling areas of the Loviisa nuclear power plants.

A water trap in the curve of a pipe in a nuclear power plant is in principle the same as the water trap under a kitchen sink. Water in the curve in the pipe prevents circulation of steam.

A water trap in a nuclear power plant would cause steam pressure in the upper portion of the reactor's pressure vessel to increase and push the cooling water in the pressure vessel aside. This in turn would result in uncovering the tops of the fuel rods and in overheating, if the situation were to continue for long.

Imatra Power has studied procedures by which a water trap could be removed if necessary or its effects eliminated.

Imatra Power gave an explanation of the water-trap matter to the Radiation Safety Institute at the end of November. The Radiation Safety Institute, however, considered the danger of a water trap to be very poorly defined matter. There are no computational methods by which a precise picture can be obtained.

Because the matter is up in the air, Imatra Power will probably be required to take action to prevent a water trap during the next annual maintenance at the earliest. The problem can be solved mainly by building new pipelines in the plant with which water locks can be broken.

Water traps can be formed at the sites of "steamers" along the pipes in the cooling area of the reactors of plants like Loviisa's. Steamers are heat exchangers, in which water heated in the reactor heats water on the turbine side of its own layer until it becomes steam. There are six steamers in each plant like Loviisa's. At the site of a steamer there are curves in the pipes, both where the water enters the steamer and where the water comes out.

A By-pass Pipe Would Help

It has been noted by Imatra Power that one possibility to resolve the situation would be to build a pipe to bypass the steamer. In that way the water traps could be connected when necessary and the situation would break up. Another possibility would be flooding. This would mean releasing the water between water traps, possibly onto the floor of the reactor building.

A water trap could also be eliminated by starting up the main circulating pumps. But this solution by itself cannot be relied on. It must be taken into account that in the worst case there might not be any electricity available from outside.

The water-trap problem has already been discussed internationally for a long time. In Finland the matter became current about a year ago when it was also treated in public. The possibility of formation of a water trap was studied at that time with a so-called miniature model. Tests with the miniature model showed that no water traps will form. The Soviet producer of the Loviisa plants is also convinced of the same thing.

Formation of a water trap would be a very serious matter for a nuclear power plant. The resulting situation would in worst case damage the fuel. But before a water trap situation could arise, a very peculiar situation would have to have developed in the plant. Among other things, a break of a particular size would have to occur at a particular place in a pipe.

Loviisa 2 Running at 80 Percent Power

According to Imatra Power, test operation of the second Loviisa unit has progressed well. In the test operation, power has been increased gradually, and at this moment it is at 80 percent of its maximum 440 megawatt power.

Imatra Power is striving to be able to request permission to start up Loviisa 1 after its long-extended repairs. Start up of Loviisa 1 has been delayed by defects noticed in the steamers and, in the most recent phase, defects in the main shut-off valves in the cooling area.

9611
CSO: 5100

FRANCE

URANIUM PROSPECTING, EXTRACTION CONTINUING APACE

Paris LE NOUVEL ECONOMISTE in French 24 Nov 80 pp 54-57

[Article by Olivier Drouin: "The Uranium Rush"]

[Text] Uranium prices are crashing. Prospecting, in which France participates actively, has never been more vigorous. Fifteen years of efforts are needed to exploit a find. And producers are anticipating future losses.

"Regret cannot find any interested buyer." This is the tenth time that the staff of the American company Nuexco (Nuclear Exchange Corporation) has sent the same telex. It is currently impossible to satisfy the uranium dealers; unlike the petroleum market, the buyers have deserted this one. Located in California, in Menlo Park, close to San Francisco, Nuexco is one of the very few uranium brokers in the world.

Each month it sends to its clients -- producing miners and electric companies -- a thin bulletin in a yellow cover. These are the reference quotes on the spot market; and since no official price for uranium exists, these quotes constitute the best market indicator. For the last six months, the Nuexco bulletin has been bringing nothing but bad news to producers. Prices have crashed: over 40 dollars at the beginning of the year and barely 29 dollars today, for one pound of yellow cake, the concentrated yellow powder which is used in all the commercial transactions of natural uranium.

It was known that the sudden slow-down of nuclear programs throughout the world, except in France, would sooner or later have its repercussions upstream. But the date and magnitude of the phenomenon was not known. All it took to precipitate a crash, was a decision on the part of uranium producers and especially of the American electric companies, which hold enormous amounts (three years' consumption), to liquidate a portion of their stocks in order to refill their drained treasuries. A catastrophy for Georges Besse, president of Cogema, a subsidiary of the Atomic Energy Commission (CEA) and major French uranium producer (nearly 2000 tons extracted from the Hexagon this year), who just announced a production reduction of 10 to 20 percent for next year.

The uranium market is strange. Cogema limits its production and closes work sites, but at the same time buys back the Industrial Company for Nuclear Fuels (SICN) from Alspi (Alsacienne de Participations) and Saint-Gobain, and together with Framatome, begins a project for a new plant to manufacture enriched uranium pellets at the Tricastin site. Construction will begin in two months.

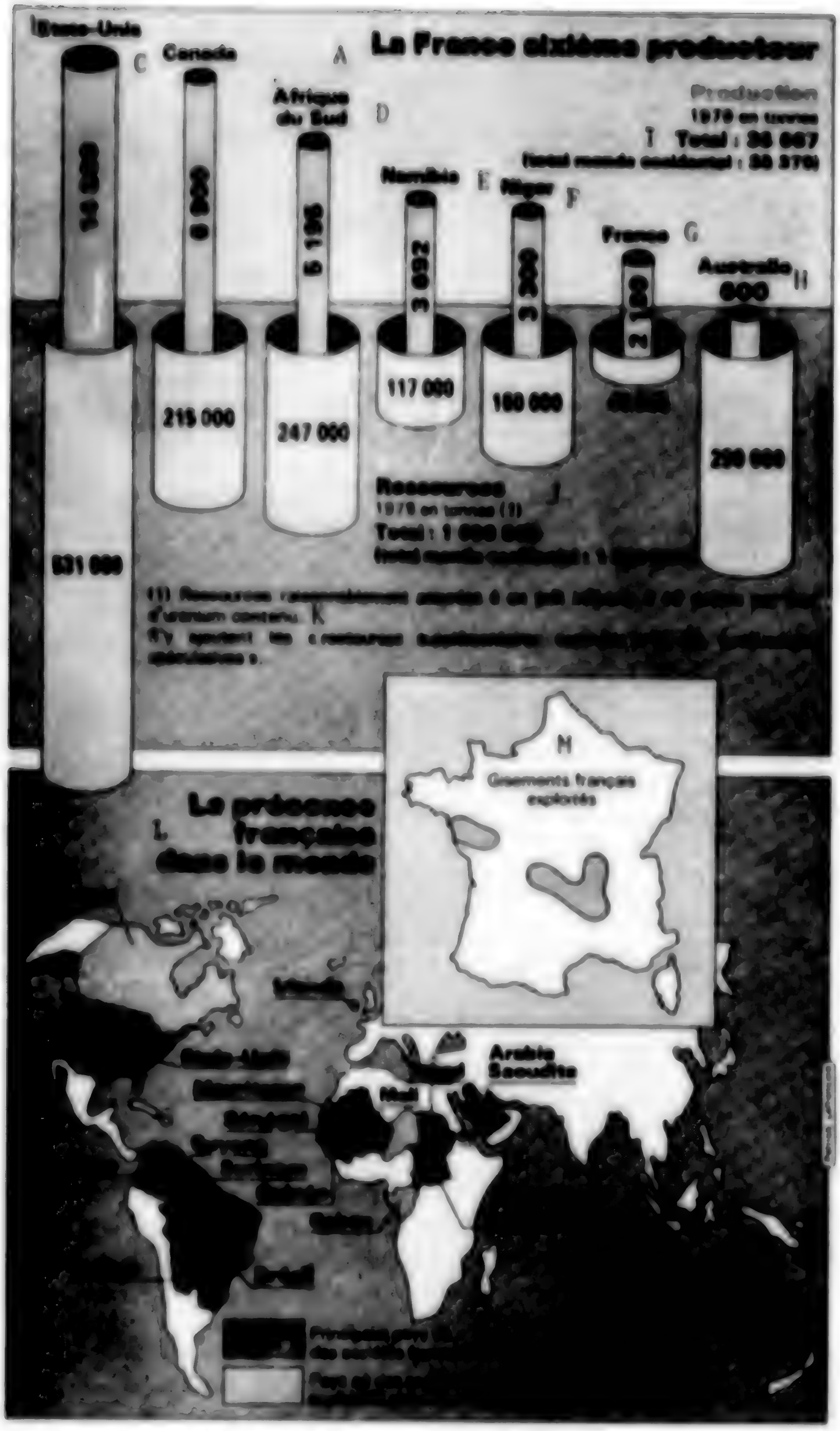
Offers are superabundant, but two months ago, at the annual congress of the Uranium Institute meeting in London, the talk was only of shortages for the coming years. The producers were complaining of shortages but prospecting has never been more vigorous.

During the 1960's, the saturation of military needs had abbruptly ended a frantic race for uranium in the western world, and the uranium cities that had mushroomed in the Wyoming desert or along the large Canadian lakes, had changed into ghost towns. It's all different today. Civilian needs are saturated, but the producers do not want to cross the desert again; when they hear talk of shortages, they take out their Geiger counters.

The consensus is that the slump in natural uranium prices will last at least five years. But it takes years of prospecting to discover a deposit, and more than ten years are needed between discovery and the beginnings of exploitation. All of which means that the producers must take a long range view. Today, they are in the worst of situations: their income has decreased with the price drop, but prospecting expenses have increased. The election of Ronald Regan, whose advisers want to give priority to nuclear power, bolsters their commercial hopes, but the financial battle threatens to be a hard one: several billion dollars per year have to be invested in research or the control of new uranium deposits.

In France, the stakes are considerable: the French are only the sixth largest producer in the world, but they are also the second largest customer. Consequently, the uranium rush at home and abroad.

In terms of production, there are six participants in the great hunt, for which they spend about 500 million francs per year. Leading then is Cogema, which alone provides about 85 percent of France's uranium supply, conducts 60 percent of the French prospecting effort in the Hexagon and throughout the world, and directly or indirectly controls some 10 percent of the world's resources. Five other groups search for and extract uranium: Imetal-Mokta, of the Rothschild group; Minatome, joint subsidiary of PUK and Compagnie Francaise des Petroles; Dong-Trieu, subsidiary of Empain-Schneider; Elf-Aquitaine, which carries out research in France in association with EdF (French Electric Power); and on a smaller scale, CIM (Industrial and Mining Company), a subsidiary of Rhone-Poulenc. A week hardly goes by without the publication in JOURNAL OFFICIEL of a request for, or award of a mining permit: 13,000 hectares of mines and quarries, 530,000 hectares of studies permits, and more than 450,000 additional hectares waiting for authorization. Confined for a long time in the regions of the Center, Brittany, and Vendee, the studies now cover more than 40 departments. Prospectors today try their luck all the way to Alsace, in the wilderness area of Mercantour, the Alps, the Maures mountains, and so on. "It brings me back to the 50's," was what one geologist told us.



Key:
- (A) France, the world's sixth largest producer
- (B) United States
- (C) Canada
- (D) South Africa
- (E) Namibia
- (F) Nigeria
- (G) France
- (H) Australia

(I) 1979 production in tons. Total: 36,667 (western world total: 38,379)
(J) 1979 resources in tons (1). Total: 1,600,000 (western world total: 1,850,000)
(K) (1) Reasonably assured resources at a price of less than 40 dollars per pound of uranium content.
Added to these are the "estimated additional resources" and the "speculative resources."
(L) French presence in the world
(M) Exploited French deposits
(N) Major countries where French companies have undertaken searches
(O) Countries where French companies are currently exploiting uranium-bearing deposits

It is true that the stakes were crucial at the time: when the CEA was formed in 1945 to develop the French atomic bomb, uranium was not yet exploited in France and could not be bought abroad. In order to retain mastery of nuclear weapons and prevent proliferation, the United States, together with Canada and England, had decided to monopolize the purchase of all the uranium available in the western world, and then had created the CDA (Combined Development Agency) cartel with producers from the Belgian Congo, Australia, and South Africa. At that point France launched a vast prospecting program on its own territory and in Africa. But that's where the comparison ceases: the situation has changed.

"Thirty years ago," Michel Massonaud, president of Dong-Trieu, tells us, "the uranium race was like the gold rush. Amateur prospectors participated in the hunt and were trying to finance their eventual discoveries in "indicator stock markets" improvised in village cafes in the Massif Central." It's different today: instead of using Geiger counters, the peasants block the roads and organize themselves into defense committees. The exploitation of the mines, often as open pits, is devastating. Uprooted vineyards, deforested land, and fields dug up, reshaped by the dumping of steriles, the slag-heaps of uranium mines.
At Augeres, near Limoges, for instance, 800,000 tons of stone have to be carted in order to extract 120 tons of uranium from the Crouzille deposit; together with Escarpiere in Vendee and Lodeve in Herault, whose exploitation will begin in a few weeks, this is one of the major deposits exploited by Cogema. Almost everywhere the country people are displeased, and speak up: antinuclear march in Pyrenees-Orientales last summer; establishment of the Uranium Network in France, to coordinate the opposition; road blocks several months ago in the Saint-Sylvestre commune (Haute-Vienne) and in the neighboring village of Grandmont, to prevent Cogema from pursuing a drilling campaign; and a four-day march in Paris. "We don't want to hear about uranium in our village," shouts 52 year-old Andre Christophe, farmer, Saint-Sylvestre councilman, and officer of the Grandmont Movement Association.

"Uranium mines are ten times as polluting as nuclear plants," states the Moutiers Defense Committee, in Savoie. Yet in terms of radioactivity, natural uranium is not at all like the 3 percent enriched uranium used by light-water plants, and obviously even less so than the highly enriched (93 percent) uranium of the type delivered by France to Iraq for its research reactor. "Uranium is not the only culprit. The problems are caused mostly by radium and its derivatives, contained in the uranium ore, and notably by radon, a radioactive gas produced as a constant stream during the desintegration of radiun, which is released freely into the air," respond the opponents.

The renewed local opposition has not managed to cool the prospectors' interest: recent discoveries are enough to stimulate them. Last May, Cogema discovered at Coutras, north-east of Bordeaux, a deposit of 20,000 tons (the energy equivalent of 200,000 tons of oil), which has made it possible to reassess the French resources by 20 percent (100,000 tons). Exploitation will begin in about ten years.

Supplies

Despite this fruitful prospecting, the role of French mines in the national consumption of uranium can only diminish in the future, since EdF, the one and only customer except for military needs, is particularly greedy. Already the largest consumer in the world, buying as it does 15 percent of the world's production, EdF today uses 6000 tons of uraniun per year (as compared to 1600 tons in 1976). The French mines supply about one half of these needs. The uranium extracted from the Hexagon then represents only about 30 percent of the consumption; hence the prospecting effort to diversify the supply by moving into foreign countries.

Nigeria and Gabon, where CEA prospected in the early 50's under the direction of Jacques Mabille, assure a large portion of our supplies. Cogema, which directs two Nigerian exploitation companies -- Somair and Cominak -- will pull out 1750 tons of uranium from Nigeria during this year, as well as the greatest portion of Gabon's production (850 tons out of a total production of 1200 tons), where the exploitation is carried out by Comuf, a consortium under the direction of Imetal-Mokta. But these two African countries, where the French groups are straining to extract a maximum of uranium to preserve the Hexagon mines, are not enough to assure a policy of supply diversification. Many other regions of the earth are being coveted.

A supply contract has been signed with South Africa, third largest producer in the world, and part of the production of the largest mine in the world, at Rossing in Namibia, belongs to France, Minatome having a 10 percent participation in the exploitation consortium under the direction of the multinational corporation Rio Tinto-Zinc. Minatome, whose ambition is to play an important role on the world market ("Five percent of the world market by 1985," states Louis Deny, vice-president of CFP, one of the two parent companies) and to sell its uranium in France as well as outside the Hexagon, has become the largest private prospector: an exploration budget of 120 million francs in 1979, or one-half of Cogema's expenses. "One-fourth of our effort is spent in France," says Claude Beaumont, president and director general of Minatome, "one-fourth in Australia, and the remainder in six or seven countries, among which Columbia, where we have been the first ones to show an interest in uranium. Our policy of geographic diversification is essentially aimed at countries with a reputation of stability: we are investing today in operations which will not bring returns before 15 years!"

Two oases of stability hold potentially huge resources: Australia, where uranium exploitation and even prospection are only beginning, and Canada.

During his visit to Australia last September, Andre Giraud, minister of Industry, discussed the purchase of uranium ore, investment programs which would allow French groups to become owners of reserves on location, and a project for construction and financing by France of an enrichment plant in Queensland. Since then, in addition to Minatome, EdF has placed a representative on location, because this public enterprise is now directly interested in uranium so as to better guarantee its future supplies. It's a matter of dependability and a matter of money.

"We want to buy as close to the source as possible," says Robert Janin, head of EdF's Fuels Department, who has signed contracts with Minatome, and buys directly the production of Dong-Trieu (200 tons in 1980, 400 tons forecast for 1983) without going through Cogema, who until now had been a quasi-exclusive supplier for a single customer. EdF currently plans to obtain participation in Australian mines, since some of its executives feel that Cogema's uranium is somewhat expensive, given that the latter must amortize significant investments made at all stages of the fuel's cycle. A direct participation in mines will make it possible to obtain the material at cost, and especially to have a slice of the pie: mining revenues.

The presence of French groups is much more established in the second coveted country, Canada. That is because Mokta has discovered a veritable radioactive Eldorado at the Cluff Lake deposits, north of Saskatchewan, a region as large as France but with barely one million inhabitants; these deposits will begin to be exploited next year, an achievement which took nearly 20 years of effort. Discovered in 1973 after 10 years of patient search in one of the coldest and wildest regions of the earth, the Cluff Lake deposit is a true geologic anomaly: depending on location, the uranium content varies from 1 to 10 percent (whereas today, a deposit is considered as very good when it contains 1 percent, that is, when 1 kilogram of uranium can be extracted from 1 ton of ore).

None of the tens of companies which rushed to the Amok concession (Mokta 45 percent, Cogema 30 percent, Minatone 25 percent, with the State of Saskatchewan taking 20 percent of the shares) was able to find comparable deposits. But the exploitation, whose total costs will amount to more than 150 million dollars, has not been a trivial matter, and Mokta, who operates it, is still not home safe. "We had to negotiate for one year to establish a fiscal return (60 to 80 percent of the profits, depending on production rates)," Jean-Yves Eichenberger, vice-president of Imetal-Mokta, tells us. "We were ready to start, but under pressure from ecologists the government of Saskatchewan formed a commission for the exploitation of the deposit. This procedure took two years." Amok got a green light in October 1978 after having mounted an impressive campaign of persuasion: travelling exhibit in villages, hiring of the world's greatest experts and best lawyers to present its case to the court. But last summer, the French consortium had a new setback following an incident that occurred on 20 June aboard an Air Canada plane headed for France, transporting 118 passengers and 58 barrels of uranium dust from the Cluff Lake deposit. The Canadian Control Commission for Atomic Energy has forbidden Amok's exportation to France because one of the barrels had opened and spilled part of its contents in the luggage compartment.

Will the battle thus undertaken by the French mining companies on all fronts be a profitable one? Even though France allocates much more money to uranium than to other metals, it is still far from having reached its goal: it lags behind Rio

Tinto, the largest producer, which provides more than 20 percent of the western world's production essentially from South Africa, Namibia, and Canada; and especially behind Exxon, the world's largest investor in prospection. With its fantastic financial means, the oil giant can afford to overlook the present uranium price slump in order to bet right now on the long term. Its specific objective being to be the big winner in the uranium battle, when the shortages begin to make themselves felt.

11,023
CSO: 5100

FRANCE

PRONUCLEAR-ANTINUCLEAR FORCES: NEW STRATEGY TOWARD PLANNED PLANT

Paris LE MONDE in French 20 Dec 80 pp 33-34

[Article by Marc-Ambroise Rendu: "The Nuclear Plant at Civaux"]

[Text] /"This is not Plogoff, here!"/ [in italics] Whether one is public official of the prefecture, an antinuclear activist an elected official a trade unionist or an EDF [French Electric Company] technician, everybody repeats this formula. At least, for once, on the occasion of a nuclear plant project, there will be no physical confrontations; this is the case of the Civaux nuclear plant, located 30 kilometers from Poitiers on the shores of the Vienne River. The police forces can leave their riot-control gear in storage.

A visit of the work site is quite educational. Less than 1 kilometer from the Romanesque belfry and from the mysterious Merovingian necropolis of Civaux, on the left bank of the Vienne River, in the pastures which are above, drilling equipment is already in use. At least 10, colored bright red, are drilling the underlaying alluvions and limestone. Two months ago, at this same location, 3 to 4 thousand opponents were marching with their banners. According to the authorities, no such "mass" assembly had been seen in the region for ages. In the Civaux and Valdivienne communes, the two basic administrative units concerned by the nuclear plant, the opponent groups had recruited 350 members: a record.

In the surrounding region, some 20 committees have sprouted in no time. However, at the site, there are only two guards, idly watching over it. All they have to do is count sheep.

After years of more or less sterile quarrels on every nuclear sites within French borders, has something been found here to start a debate in a less absurb fashion? Certainly, the Poitou inhabitants do not have the Breton or Alsatian peculiarities, nor the opposition traditions of the Tarn-et-Garonne and Isere departments electorate. Neither are they resigned to "suffer" the unavoidable development while grumbling about it. Quite to the contrary. Still, transitions have not been made easy by Rene Monory, the minister for economy, also president of the Vienne department council and mayor of the city of Loudun (located 24 kilometers from the Chinon nuclear plant). Acting like a conjurer pulling a rabbit from his hat, it is he who at the end of session of the departmental council, on last 4 February, launched the idea of this nuclear plant. Nobody had sought to site nuclear reactors in Poitou-Charentes region so rapidly, not even EDF. A month later, 25 council members out of a total of 35 did express a favorable opinion; while opponents were mobilizing their supporters. Soon, EDF was conducting numerous preliminary studies. Things were briskly conducted. As shown by the antinuclear groups commentary: /"It is a race for time between us and EDF"/ [in italics] Possibly, but in this competition it is surprising to note much less dirty tricks and back-handed blows than in other cases. Every side recognizes that on the whole the other sides are respecting the rules.

First, there is EDF which from the beginning proclaim its intentions. It asks for a right of eminent domain for four nuclear reactors of 1 300 MW, but it will only build two at this time. Area required: 160 hectares [approximately 400 a]. In addition, a rail connection of 4 kilometers length linking with the Poitiers-Limoges line and an electric power substation covering some 10 hectares [approximately 25a]. This will be the starting point of two power lines of 400,000 volts, one going to Saumur, the other to Eguzon. Each reactor will be coupled to a 160 meters height cooling tower which will evaporate Vienne river water at the rate of 2 cubic meters per second. Because of its limited summer flow, the river will barely be able to provide for two reactors and to dilute their radioactive effluents. For the other two, a retaining dam will have to be built somewhere upstream, holding back 400 millions of cubic meters of water and releasing it in the summertime.

This is the weakest point of the project, as the engineers know quite well; they promise to reduce further the quantities evaporated and not to elevate the Vienne River temperature by more than 3°C, nor to ever exceed 28°C. To accomplish this, they will have to improve their installations.

Public enquiries should be held in the summer of 1981, and work should start in the first days of 1983. The first two reactors should cost approximately Fr 8 billions. Taxes collected by local communities: 90 millions per annum.

It is an absolutely classic proposal.

What is less classical is the manner used to present it. First, local elected officials are pampered. At no time does any EDF technician appear on site without first informing the mayors. The local inhabitants are invited to judge the exhibits and documents of the case. Practically, a nonstop bus service carry them to visit the Chinon and Saint-Laurent-des-Eaux nuclear plants. There, they can observe both the old reactors and the work site for the new units. In less than 5 months, some 5000 persons have taken part in these plant tours.

EDF has also recognized that the more the work project would be integrated to the region activities, the better it would be accepted. So, it is planned to recruit some 2 thousands local inhabitants for temporary work, rather than using "imported labor". But it does not explain what will follow for these nuclear energy crews, nor how the local small enterprises will survive the competition with their lower salaries.

Except for the specific nuclear equipment, EDF renounces its customary approach of using large building enterprises, which in turn subcontract to certain local firms. This time, the project has been divided into 1000 separate lots, which are also within the ability of Poitou region companies. They should be able to obtain for more than 800 millions of work orders for earth work, concrete laying, machinery and related constructions.

Are those companies ready to act? It is reported from EDF sources that the local "can-do" spirit is surprising. In fact, the Vienne department council has not limited itself to provide its general agreement. It has created a committee, named "Vienne Energy", to maintain, as much as it is feasible, its control on the developments. And this is an active committee. It has already lined up 70 local enterprises which could join in the project. It has organized tour of the Belleville-sur-Loire work site for representatives of interested trade groups; to observe how dozens of small firms and shops have created a common interest consortium to win the contract bidding. An example which should be followed.

/A more methodical opposition/ [in boldface]

There is activity in the communes too. The elected officials are ready to offer some resistance, even those who are the most respectful of governmental decisions and the staunchest supporters of nuclear energy. Each month, mayors and departmental councilmen are meeting at the prefecture to review the project progress. Civaux refuses to see its territory divided by a railroad spur. Valdivienne intends to select itself the location of the electric power substation and the path followed by the two power lines. Land is being purchased in various locations to provide for housing of the EDF personnel.

And a coordination of the operations is requested.

Even beyond the work site, mayors and departmental councilmen are already facing to what one of them calls: "joint risk management." In other terms, the power plant will be under a commission control, which will be kept fully informed of the most minor incidents.

Even opponents seem to be both more rational and more methodical about it here. The numerous committees have not fallen into the trap of an "antinuclear gut reaction", which would be playing on the fear of atomic energy and rejection of the Parisian technocrats. Their joint operation is described as a "nuclear information" action. Its organizers are multiplying information meetings. Their first task is to fully comprehend what constitutes a nuclear power plant and the inherent risks for its environment; before starting to throw stones at the police forces.

The Poitou region antinuclear activists are realists. They have figured out that the government is even less likely to renounce the Civaux plant, now that it has a majority of the elected officials on its side. So, the opponents will try, by carefully preparing their case, to wring out of EDF the highest degree of safety for the inhabitants, and an additional dose of care for the natural environment.

Undeniably, the newest aspect of the Citaux case resides in the fact that a true economic debate has started, triggered by it. It is initiated simultaneously by the trade unionists of the CFDT [French Democratic Confederation of Labor] and the scientists from the Poitiers University (13,500 students). It is an easy play for EDF to underline the fact that the Poitou-Charentes region consumes 4.5 billions of kilowatt hours (kWh) each year, while it produces only 180 millions kWh. With authority, it affirms that electricity requirements will reach 7.8 billions kWh in 1985, then 10.9 billions kWh in 1990, and 13.5 billions kWh in 1995. Thus, it concludes, the Citaux power plant which will start to produce in 1991 is definitely needed.

But the local CFDT unit is not dazzled, and it has recomputed the EDF figures for the 17 Western departments. In a document published last June, it demonstrates that by adding four 600 MW coal burning units at Cordemais and Brest, in addition to the 8 nuclear reactors currently being built at Dampierre-en-Burly, at Saint-Laurent-des-Eaux and at Chinon, the French western regions would be exporting electrical power in 1990. Thus, no need to have recourse to the proposed power plants at Plogoff, Pellerin and Civaux. The Poitiers University scientists have even progressed further out. They have just recently released a study entitled: "Which Energy Policy for the Poitou-Charentes Region?" Their objective is to face the elected officials with a question: /"The Civaux nuclear power plant will only satisfy the electricity needs and it will only provide a few hundred temporary jobs. Instead of blindly accepting it, let us ask ourselves whether other strategies could not resolve better our needs for energy and jobs."/ [in italics]

Therefore, the nonconformist economists have prepared three regional growth models reaching up to 1990. The first matches the national guidelines: it provides for building the nuclear plant, it accepts a priority for road transports, the formation of large agricultural and industrial enterprises, the promotion of electric appliances for individual usages, etc. The second, much more region oriented, is based on energy conservation, calls for a priority to rail services, a campaign to promote individual betterment of housing and the development of local enterprises to satisfy the created demands. The third is an improved version of the second model. It adds a regional program to use new energy sources. The conclusions of these 3 modeling exercises are surprising. In the first one, some 2000 jobs would be lost and the investment costs would be the highest (Fr 21 billions). The second would be the least costly (Fr 6 billions for investment) and it would create 40,000 jobs. As to the third, it would cost Fr 10 billions, but it would provide 60,000 jobs in the Poitou-Charentes region.

Certainly, on specific points the study can be contested. It has the distinct feature of pointing out that accepting the nuclear power plant is a long-term political choice. Yet, the Poitou-Charentes region is one of the better noted area for new energy sources development. Potentially, it has wind, solar, geothermal and particularly biomass energy sources.

It is doubtful that such exceptional local potential sources will ever be used if the Clairvaux [as printed; Civaux?] reactors do produce their billions of kilowatt-hours. That is the point that both the Poitiers University scientists and the CFDT leaders are attempting to present at the Economic and Social Committee where this question is scheduled to be debated at its 15 December session. This action is again "a first" which the Poitou-Charentes activists should be proud of.

[signed: Marc Ambroise-Rendu]

9627
CSO: 5100

CDA, PVDA INTERNALLY SPLIT ON 'ACTIVE NEUTRALISM,' 'NUCLEAR PACIFISM'

Amsterdam ELSEVIERS MAGAZINE in Dutch 13 Dec 80 pp 141-143

[Article by Frank Lafort: "The Model Alliance Between Lubbers and Den Uyl"]

> [Text] CDA chairman Lubbers and PvdA leader Den Uyl want to continue to take shelter under the American atomic umbrella in the future. If the socialists, under the influence of the peace movement, should nevertheless opt for atomic pacifism in 1981, then a new coalition agreement between CDA and PvdA will be almost impossible, according to Frinking, CDA member of the Second Chamber. Recently the political leaders of the CDA and PvdA have been trying, when it comes to peace and security, to prevent the Netherlands from plunging into the "active neutralism" of the peace movement.

"For the sake of the protection of human life, we appeal to our government and parliament to work for détente between the power blocs. To ban the use of all nuclear weapons. To recognize the danger that emanates from the enormous number of atomic weapons that are stockpiled. For that reason a start must be made with rendering these nuclear weapons harmless." The Dutch Society for Polemic Medicine, a cooperative organization of physicians, wants to publish that text about the first of the year in full-page advertisements in all the rural newspapers. Dutch physicians, following their English and American colleagues, want to state publicly their anxiety about nuclear armaments.

The General Synod of the Dutch Reformed Church goes a step further. Nuclear weapons must be unilaterally removed from the Netherlands in order to make an active contribution internationally to disarmament. With this "renovated" profession of faith the General Synod recently followed the Catholic peace movement Pax Christi in rallying under the banner of the Interchurch Peace Council (IKV). For the IKV's credo is: all nuclear weapons off the face of the earth, beginning with the Netherlands.

Partly because of the stone-hard utterance of the General Synod, uneasiness about the threatening polarization in the discussion of the Dutch security policy is growing in the Second Chamber at the political top of the Christian Democrats and Socialists. "Since the Dutch Reformed Church's statement of position I have the feeling that the CDA parliamentary delegation has been enlarged and that a number of ecclesiastical authorities have taken seats on our green benches," says Ton

Frinking, 49, the defense specialist of the CDA [Christian Democratic Appeal] delegation. In the other corner of the political arena, in the PvdA [Labor Party], there is also uneasiness. In favor of denuclearization of the Netherlands there are 13 convinced atomic pacifists to be found in the PvdA delegation. On the other hand, their potential standard-bearer, Den Uyl, with the foreign affairs specialists Van der Stoel and Ter Beek in his wake, is waging a grim internal battle to call a halt to the pacifistic radicalization process. That is no easy task, and it is not for nothing that Den Uyl has tied his political fate to the outcome of this party debate. Just as in the case of the Socialists [PvdA], the Christian Democrats, not to mention the D'66 [Democrats '66] supporters, are greatly divided internally over the rôle of nuclear arms in Dutch defense policy. But it is precisely because of the division of minds within the two biggest political parties and the speaking with many tongues that their chairmen are scarcely succeeding in setting a clear political message against the simple slogans of the (church) peace movement. That is having its effect at this moment, when the Socialists and the Christian Democrats are working on their election campaign platforms.

The rank and file of the CDA and the PvdA are threatening--when it comes to nuclear weapons--to vote for "moral weapons" instead of political warfare agents. The peace movement's slogans have put the CDA and the PvdA on the defensive, simply because political leaders like Den Uyl and Lubbers did not see soon enough that they had to guide the discussion of peace and security. The Christian Democrats delegated this problem to the "weighty" Donner commission, but because of internal division that commission has not yet come up with a final report. Opposition spokesman Den Uyl has used almost all his forces fighting the Christian Democrats in public. He was slow to see that danger might well come from an entirely different quarter, namely a pacifistically radicalized rank and file that is steering straight for an "active neutralism." To turn the tide, Den Uyl has publicly started a counteroffensive just before the "time of decision" (by the end of February the PvdA must definitively name its standard-bearer). According to the socialist the most important thing is to keep the argument from gaining ground in the United States of: "Oh, Europe--you can write it off. It is neutralist-pacifist. It wants clean hands. It is America and nobody else that will be left with the problem of defense." A point of view of the "Realpolitiker" Den Uyl which, though it encounters violent resistance within his own party, fits very nicely with the CDA philosophy. Lubbers and Den Uyl want to continue to work within the NATO alliance in order to be able to exert a direct influence on the arms control process. The two politicians recognize that the Dutch influence is limited, but, as Lubbers says: "It is sound. Our influence will be strongest if we express our views within the alliance with complete clarity and unanimity."

To this must be added the fact, according to Frinking, that atomic pacifism is really not the guiding principle of the PvdA and the CDA. The fact that a part of the PvdA, led by Den Uyl, still wants to keep two nuclear tasks is an evidence of that. It is also the policy line, according to Frinking, that makes a collaboration between CDA and PvdA on the point of peace and security possible.

Frinking says: "The moment the PvdA takes the road of atomic pacifism, a great gulf will form between the two parties. Den Uyl realizes that. I, too, find it questionable whether we can reach a coalition agreement with the PvdA if it definitively rejects the nuclear weapons strategy. For the PvdA itself the most important problem is how the socialists in Europe can continue to pursue a security policy. Den Uyl has borne the responsibility of government and knows how he can serve Dutch interests at the international level. He also knows where the real problems lie. Den Uyl realizes that you can prevent the arms race only by long negotiating and only if the Netherlands has an initiative of its own to take within the alliance. It is logical and understandable that Den Uyl ties his own position to such an essential part of foreign policy. That calls for a great deal of leadership, and Den Uyl is exhibiting that now."

Atomic pacifism, Frinking says, takes real form in the demand of a part of the PvdA and the (church) peace movement that the Netherlands unilaterally remove the nuclear weapons from its territory. These demands, whether or not coupled with the demand that the Netherlands renounce its NATO membership, mean in practice that nuclear weapons would no longer play a part in Dutch security policy. The CDA, Frinking says, would not like to lose the atomic umbrella: "But the problem is that there are *too many* nuclear weapons stored up. It is clear that the number of nuclear weapons must be reduced. And our efforts and those of the government are directed toward that."

The peace movement, according to Frinking, has thus far emphasized only the war-waging function of the atomic warheads. It is not brought out in the discussion that atomic weapons, in considerably smaller numbers, can contribute to stabler relations between East and West. Tactical combat weapons, such as atomic mines and the nuclearization of howitzers, do not belong in the CDA philosophy because they do not serve as a deterrent. "That is why the CDA delegation has always said 'no' to the neutron bomb," Frinking says, recalling that it was the Dutch government that urged the NATO allies to revise drastically the nature and scope of the tactical nuclear weapons. Even Kissinger, according to Frinking, said that the Americans hardly know how they must use this sort of weapons. They were introduced at the time because the NATO countries were far behind in the field of conventional armaments. It was a *cheap* way to overcome the lag, says the CDA member of parliament. It was planned that the so-called "Shift study," a NATO study of the future scope of tactical nuclear weapons, would be finished by the end of 1980. For unknown reasons, that report has been delayed a year. That raises a lot of problems for the Netherlands, because in the middle of 1981 the political parties in a future coalition agreement must say whether they consider this NATO study "tone-setting" for the question of whether to install 48 Tomahawk cruise rockets on Dutch soil or not. The Van Agt cabinet decided a year ago that the knot would not be cut until 1981 in regard to the deployment or nondeployment of the new weaponry. Personally, Frinking is not optimistic about the outcome of the Shift study: "I have understood that the NATO nuclear weapons that we have known for a decade would be replaced by conventional weapons are regarded in the Shift study as a reduction in the total number of atomic weapons. Now the possibilities arise of installing 572 new medium-range weapons. *This is a way of counting that we did not have in view and with which we cannot be content.* For it is not an answer to our question of how we can justifiably get rid of the short-range weapons."

It has now become clear that the NATO study is lying heavy on the stomach of the CDA delegation. Feelings of distress that threaten to be stirred up still further if the Catholic bishops should rally behind the IKV slogan. CDA Second Chamber member J. de Boer has warned the Catholic dignitaries that if the bishops take over the slogans of the church peace movement and wrap them in their authority, "they will be leading the Catholic part of the population back on this point to relations between church and politics that have caused indescribable damage and frightful human misery in the past and that we all imagined were fortunately behind us." That is harsh talk, and Frinking is not so happy with it. To him it is not so sure yet that the bishops will take the same view of the IKV position as the Dutch Reformed Church. Traditionally the Catholic church since the Mandate, according to Frinking, has been extremely reserved when it comes to partisan political utterances.

Frinking says: "Like the church, the CDA is clearly concerned about the arms race. If the bishops rally behind the IKV slogan, I question whether they will achieve much by it If we follow their counsel nothing will change in the world situation, and we as Netherlanders can only look on powerlessly."

8815
CSO: 5100

SWEDEN

PEOPLE IN VICINITY OF NUCLEAR PLANTS TO GET IODINE PILLS

Stockholm DAGENS NYHETER in Swedish 24 Dec 80 p 12

[Text] Somehwere around 720,000 people are going to get iodine pills which are supposed to prevent damage to the vital thyroid gland in case of a nuclear power accident. That is because so many people live, go to school, work or have leisure-time homes within 12 kilometers of the nuclear reactors at Barseback, Oskarshamn, Ringhals and Forsmark.

An envelope with 10 iodine pills is to be sent to the people living around nuclear power plants every other year. Other people who can be affected by an accident will get pills at work or in school. It will also be possible to get iodine pills at pharmacies without a prescription.

This summer, the Institute for Protection against Radiation was given the assignment of preparing the distribution of iodine pills by the government. That is being accomplished in cooperation with the National Social Welfare Board and the four county government boards concerned.

The Institute for Protection against Radiation is now reporting on the status of its work. That is taking place because the government must include the new preparedness plans concerning nuclear power in its energy bill to be sumitted to the Riksdag in February.

Can Cause Cancer

Radioactive iodine in gaseous form is one of the dangerous substances which can leak out over large areas if a nuclear power accident occurs. If such substances enter the body by being breathed in, they can collect in the thyroid gland and cause cancer.

Iodine pills prevent such damage. The pills contain approximately 1,000 times more iodine than the daily requirement for an adult. This "overdose" causes the thyroid gland to be "saturated", so that radioactive iodine is not assimilated. However, the pills do not protect one against other radioactive substances.

The people who get iodine pills are to take one a day for a week if a nuclear accident takes place. Children under the age of one will manage with half a pill per day. The envelope with the 10 pills also contains information on alerts and evacuation plans. Such information is also to be provided on television and the radio and in the newspapers.

In all, the pills and the packages of information will cost approximately 3.5 million kronor. The iodine pills keep fresh for 2 years. Therefore everyone concerned gets another envelope every other year.

According to the ACO [expansion unknown] Lakemedel, it costs 3 kroner to produce the 10 iodine tablets to be sent to one person. That being so, the company expects to produce pills for 1 million people, or a total of 10 million pills. Every other year, 4.8 million of those pills are to be sent out in envelopes. The rest of them will be provided by pharmacies.

In January, the Institute for Protection against Radiation is to present a final report on iodine pills. Thus the government has actually collected all the information which is needed for the new preparedness plans. The National Telecommunications Administration, the Defense Ministry, the Nuclear Power Inspectorate and the County Government Board, among others, have all been involved in the work.

9266
CSO: 5100

RINGHALS COLD-WATER DISCHARGE CAUSES EEL DEATHS

Stockholm SVENSKA DAGBLADET in Swedish 15 Dec 80 p 48

[Article by Margareta Artsman: "Tens of Thousands of Eels Die at Ringhals"]

[Text] Ringhals--Eels are affected the most by the discharge of cooling water from the largest nuclear power plant in Scandinavia--Ringhals.

Every year, 35,000 eels--most of them female--have met their deaths in the washing fluid at the power plant's filtering station. At the same time, the number of young eels has increased abnormally in Viskan.

On the other hand, fish which are caught industrially are not affected by the discharge.

The radioactive discharge also does not cause any alarm. Radiation dosage is very low--and even negligible--the SSI (State Institute for Protection against Radiation) comments. The Department for the Conservation of Nature now has completed its report on the biological and radiological effects which can be reported after 5 years of activity. It is based on 14 studies. The court of the western district which is concerned with water matters must have the report to issue renewed licenses.

The first unit at Ringhals started to operate in 1974, but when the decision was pronounced it was on the condition that all four units would begin working during a period of 5 years. Now it is estimated that Units 3 and 4 will not get started before 1981 and 1982, respectively.

"We need for the investigations to be continued for at least 5 years after the fourth unit is started up," says fisheries inspector Alvar Jacobsson in Kungsbacka.

"We have to take the long view in our work," he says. "It may be that the biological effects cannot be calculated before that."

At present, 80 cubic meters of cooling water are discharged from Ringhals every second. Its temperature has been increased by from 8 to 10 degrees. When 4 units are in operation, 175 cubic meters will be discharged every second. The effect on the fish and the radioactivity of what is discharged have been the most important factors for the court which is concerned with water matters.

The Department for the Conservation of Nature states that effects can be demonstrated on many levels in the ecological system near the discharge shaft. Where fish are concerned, most organisms in the cooling systems are directly affected like the economically important eels.

Eels Attracted

"We have noticed that the eels are attracted by the warm water," says Alvar Jacobsson, "but the most serious thing is the loss of yellow eels at the filtering station. In 1975-1976, 100,000 eels were lost. Now we hope that new routines will help the eels get back out into the ocean again unharmed."

During the cold seasons, an increase in the number of salmon trout in the warm water has been observed. No fish actually avoid the warmer water--not even the cod, which is a coldwater fish.

"First, it should be noted that areas with large numbers of herring and sprats can be reached by the warm water," Alvar Jacobsson says. "At present, we cannot notice any massing of the herring, but when the discharge is doubled it is probable that large schools of herring will approach the cooling conduit."

Negligible Radiation Dosage

The Department for the Conservation of Nature's study of radiation and the ecology is to form the basis for the calculations by the Institute for Protection against Radiation of the dosage for humans coming by way of the ocean.

"That dosage is negligible," Fil lic Ragnar Bose of the Institute for Protection against Radiation's nuclear physics department believes.

"The annual dosage from the Oskarshamn plant through the water outlet is approximately 0.1 millirem," says Skure Nordlinder. "We calculate that it is a bit lower at Ringhals.

"The natural background dosage for humans is put at 100 millirem per year. The highest dosage a human should be exposed to is 5 rem--that is, 5,000 millirem per year. But on the average the dosage should not amount to more than 500 millirem. Nuclear power plants should not give a higher total dosage for humans than 10 millirem," Skure Nordlinder says.

9266
CSO: 5100

END

END OF
FICHE
DATE FILMED

Feb. 11 1981